



**2012-13 Educational Grant Application**  
**Deadline: Wednesday, March 7, 2012, by 4pm**

Name of Grant: \_\_\_Ecoliteracy Project – Focus on the Field\_\_\_\_\_

Name of person(s) submitted by: \_\_\_\_\_Kirk Evans\_\_\_\_\_

Campus/Department: \_\_\_\_\_Olson Elementary\_\_\_\_\_ Grade Level(s): \_Kindergarten–5<sup>th</sup> grade\_\_

**Total Dollar Amount Requested: \$1920** (\$1320 Foundation Funding & \$600 Olson Elementary School Academic Award Fund for Olson Facility)

Number of students who would be involved/impacted by grant: \_\_\_\_\_400\_\_\_\_\_

Name of principal or immediate supervisor who will approve submission: \_\_\_Kim McLaughlin\_\_\_\_\_

**Project Summary/Purpose:** Be specific. What is the student need which the project will address? The purpose should describe what students will know and be able to do as a result of this project. Please explain how a problem will be addressed or a situation improved because of the grant.

At a national conference – titled *Growing America's Outdoor Heritage and Economy* – held last week from Monday, February 27 to Friday, March 2, 2012, Cabinet Secretaries and White House staff laid out a bold initiative to create 21<sup>st</sup> century classrooms by engaging teachers, students and communities to build a deeper connection to the natural world utilizing three different ideas. The first idea, "Science, technology, engineering and math fields are driving forces in the global economy," said Secretary Duncan. "Partnerships between our nation's schools and our national parks, wildlife refuges and other public lands is a smart approach that can better prepare our children in STEM subjects by providing engaging, hands-on learning experiences, making lessons tangible, and enhancing schools' ties to their communities."

For the past three years the Foundation for Allen Schools has funded the Ecoliteracy Project @ Olson Elementary. Our project has a goal to build on placed-based educational opportunities by getting children outside studying, observing, playing in and experiencing local natural areas and wild places. We have utilized a three year ecological literacy model (Year 1 – biodiversity inventory, Year 2 – watershed study, Year 3 – sense of place mapping). At the end of this school year we will have completed our third year of the ecological literacy model. This model has helped our Olson community of students, parents, staff, and teachers build a deeper understanding of our blackland prairie ecology, create the first knowledge base of our ecological address and develop a more profound sense of place. For the past two years the Ecoliteracy Project @ Olson Elementary has also been the recipient of two Healthy Habitat Grants from Service Learning Texas. Students and teachers have been able to plant an aquatic plant study area across from our school, visit five local outdoor education facilities to work closely with aquatic scientist and ecologist, participate in site visits by the same scientist, create a prairie grass restoration plot in the Connemara Meadow Preserve, become trained in ArcGIS software and programming and become certified Texas Stream Team Monitors. These students have gained in-depth knowledge in local ecosystems and built a vast knowledge of the current technologies used in field based scientific investigations. Because of these experiences and trainings more than thirty 5<sup>th</sup> and 6<sup>th</sup> students have become a core group known as "Teaching Buddies". These students share their love for learning in the outdoors and knowledge of field based science investigations with more than 20 classrooms of students and teachers in Olson Elementary. The funds from this proposal will help us continue our teaching buddy program, train more students and teachers in new science concepts and techniques, help our students continue to build their ecological and environmental literacy, build a more passionate and profound understanding and love of science and help us to continue our studies in natural areas around Allen.

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**Project Description:** How will the project or program be implemented? Describe activities and tasks. Who is the target population and in what ways will they benefit?

The second idea from the national conference *Growing America's Outdoor Heritage and Economy*, secretaries are convinced that this new agreement will create new bridges between America's schools and its public lands – often at the local level, where national parks, wildlife refuges and other public lands exist in close proximity to communities, ideally situated as outdoor classrooms for teachers and students nationwide.

Students and teachers at Olson Elementary have been on a journey of naturalistic discovery and inquiry since our school opened in 2009. The Ecoliteracy Project @ Olson Elementary has given teachers and students the opportunity to participate in field investigations each month during the school year. More than 400 students and their teachers (along with their 5<sup>th</sup> and 6<sup>th</sup> grade teaching buddies) participate in these monthly trips. We will continue to target this population of 20 classrooms and 400 students. Because of the increased number of teachers and students who participate on monthly field investigations we have begun to schedule 4 buses on each field investigation day. We are requesting 4 buses for six different field investigations during the 2012-2013 school year. We will take these trips to the Connemara Meadow Preserve to study the natural areas on Rowlett Creek and learn from our native prairie grass plot that we have been working on for the past two school years. Also, our teaching buddies will lead 4 to 6 lessons throughout the year at our aquatic plant research site across the street from our school, in their “buddy” classrooms and around our school campus.

In this proposal we are also requesting \$600 in professional development funding from the Olson Elementary School Academic Award Fund given by David and Linda Olson, to take 6 teachers to the 25<sup>th</sup> GeoTech conference held in March 2013 at Bishop Dunne High School in Dallas. This conference offers leading edge workshops in earth science, and the integration of mapping technology, software and mobile applications for schools and educators.

**Which Allen ISD goals/TEKS does this project support? Limit to top two or three examples.**

**AISD will meet the needs of each student by designing engaging work for continuous learning, resulting in exemplary performance and an emphasis on citizenship.**

The state of Texas has introduced new science TEKS that will be implemented in the 2010-2011 school year. For Kindergarten and First grade classrooms 80% of the science curriculum and instruction must be field based and/or lab experiences. For Second and Third grade classrooms 60% of the science curriculum and instruction must be field based and/or lab experiences. For Fourth and Fifth grade classrooms 50% of the science curriculum and instruction must be field based and/or lab experiences. Because we have been able to create a foundation of meaningful curriculum based field investigations during our first three years of the Ecoliteracy Project we will be able to share our experiences, knowledge and lessons with more of our Olson and Allen ISD staff during the 2010-2011 school year.

- TEKS K.2-5.2 A, B, & C - The students uses scientific methods during laboratory and outdoor investigations.
- TEKS K.9-5.9 - Organisms and environments. The student knows the relationships, systems, and cycles within environments.

**What specific measurements will be used to evaluate the effectiveness of the project?**

- Utilize ArcGIS mapping software to tell the stories of our field investigations. We will document the outcomes of our experiences using iPad and iTouch technology and devices as electronic journals.
- Informal surveys (created by students through Google Documents) will be given to measure the environmental and ecological literacy of the students, parents, and teachers within our school community.
- Informal evaluations will be completed after workshops and learning session.
- Formal assessments will measure student scores on district benchmark tests and state exams. The implementation of the new science TEKS and new STAAR test will give us a good picture of our ecological understandings.
- Use continuous evaluations of our progress through our monthly field investigation.

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### **What teaching methods will be used to implement this project?**

The third and final idea from the *Growing America's Outdoor Heritage and Economy: Outdoor Education*. On Monday, February 27, 2012, Secretary of the Interior Ken Salazar and Secretary of Education Arne Duncan [announced](#) a new agreement to build programs that use national parks, national wildlife refuges and other public lands as 21st century classrooms – designed to benefit teachers, students and parents in rural America and urban classrooms alike. These programs will connect young Americans to the outdoors, improve environmental literacy, support experiential learning outside the classroom, and encourage conservation partnerships at the local level.

- Our Ecoliteracy Project will “connect young Americans to the outdoors and improve environmental literacy”. We will use methods of place-based education throughout the duration of the project (place-based education as described by David Sobel [Center for Place-based Education Antioch New England Graduate School] "learning directly within the local community of a student.")
- Our Ecoliteracy Project “supports experiential learning outside the classroom”. We continuously use the methods of experiential education --- (Experiential education as described by John Dewey: “Experience [outside the school] has its geographical aspect, its artistic and its literary, its scientific and its historical sides. All studies arise from aspects of the one earth and the one life lived upon it.” The School and Society, 1915, p.91)
- Our Ecoliteracy Project will use lessons of inquiry and discovery following the 5 E model of scientific learning (Engage, Explore, Explain, Elaborate, Evaluate)
- Our Ecoliteracy project will utilize an Ecological Framework (Biosphere, Lithosphere, Hydrosphere and Atmosphere) “to improve environmental literacy”. The Ecological Framework teaching model has been shared and presented at local, state and national conferences.

### **Timeline for project (Funds will be available after September 1, 2012):**

- Beginning in September 2012 we will start our monthly field investigations. During the months of October, November, December, February, March and April we will need our four buses each month to transport the students to Connemara Meadow Preserve.
- New 5<sup>th</sup> grade teaching buddies will be trained in September and assigned to classrooms beginning in October 2012. Teaching buddies will teach in their classrooms throughout the school year at the classroom teachers request.
- SEED Team meetings and learning sessions will be held by-monthly for planning and curriculum based ideas.
- Students will document their experiences using iTouch and iPad technologies and applications throughout the year. We will also continue using ArcGIS mapping software to tell our stories and experiences through layered maps.
- Our Ecoliteracy Project will continue to participate in school related service projects, community events and activities throughout the school year (Adopt a Roadway and Waterway Clean-up, Informational booths at Earthfest and Arbor Day, give community presentations when requested, continue our prairie grass restoration plot in the Connemara Meadow Preserve and continue to maintain and utilize our aquatic research study area.)

### **Explain how this idea or project enhances/supports Allen ISD curriculum or existing systems:**

The Ecoliteracy Project @ Olson Elementary will continue collaborative efforts with the City of Allen Parks and Recreation, Community Services and GIS departments, Keep Allen Beautiful, Recreational Equipment, Inc. Montgomery Farm, and Connemara Conservancy. These collaborative efforts involve programs, lessons, teaching and learning opportunities that continue to build environmental/ecological awareness and stewardship while enhancing our districts goals, mission statement, and beliefs by integrating science, math, reading, social studies and language arts throughout each of the grade levels. By building sense of place and a deeper understanding of our ecological address teachers and students will also be able to extend their knowledge base of community development. As we listed throughout our grant proposal we will continue to work diligently to foster these three ideas from the federal governments *Growing America's Outdoor Heritage and Economy* conference.

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**Include any additional comments or information (attach additional pages if necessary):**

Information about the *Growing America's Outdoor Heritage and Economy* conference was taken from the Department of the Interior website ([www.doi.gov](http://www.doi.gov)) press releases posted on 2.27.12 "Salazar, Duncan Partner to Boost Use of Parks & Public Lands as 21st Century Education Centers Salazar, Duncan Partner to Boost Use of Parks & Public Lands as 21st Century Education Centers" and 3.2.12 "White House Conference Sets Stage for New Era of Conservation".

To date our Ecoliteracy Project @ Olson Elementary:

- teaching buddies have given community presentations at the Rotary Club of Allen, the board of Keep Allen Beautiful, and we are scheduled to give a presentation to the Kiwanis Club of Allen in April 2012.
- students and parent set up an informational booth at the Kids Gone Wild event at the Fort Worth Stock Show and Rodeo in January 2012
- created and maintain an aquatic plant research and study site near our school
- received funding from Service Learning Texas and Texas Parks and Wildlife to reestablish aquatic plants in local ponds and waterways and native prairie grasses in the Connemara Meadow Preserve
- groups of students have visited: Lewisville Aquatic Ecosystem Research Facility, Lewisville Environmental Learning Area, Trinity River Audubon Center, TPWD Freshwater Fisheries Center and we are scheduled to visit NTMWD Bunker Sands Wetlands and the University of North Texas Environmental Learn site on the UNT campus.
- created a "teaching buddy" program that has trained more than 30 5<sup>th</sup> and 6<sup>th</sup> graders to teach lessons in outdoor inquiry and discovery to lower grades in our school
- we will build "My Place Maps" using ArcGIS software to culminate our environmental and ecological literacy work throughout this school year
- created a school Environmental Education Team (SEED Team) of 19 teachers (3-K, 5-1<sup>st</sup>, 5-2<sup>nd</sup>, 4-3<sup>rd</sup>, 2-4<sup>th</sup>, 4-5<sup>th</sup>)
- created an active Environmental Education Club (EE Club) of 5<sup>th</sup> and 6<sup>th</sup> grade students.
- has participated in four guided canoe expedition at the Heard Natural Science Museum and Wildlife Sanctuary
- collected data for the biodiversity inventory of the local flora and fauna
- participated in 2 Fall professional development workshops focused on "Nature Journaling and Field Based Inquiry" with the Roger Tory Peterson Institute from Jamestown, NY
- adopted the roadway and waterway through Keep Allen Beautiful (4 clean up dates this year)
- monitored nest boxes for Bluebirds
- built cottontail rabbit habit and readied a field plot for the re-establishment of native prairie grasses
- created a campus tree inventory with the city of Allen urban forester.
- planted and maintained a 20X20 plot in the Village Allen/Fairview Community Garden
- participated in community events (Arbor Day Celebration and Earthfest 2010, 2011 and planning to participate in 2012)
- conducted a school wide survey to track ecological literacy in our community

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**Grant Budget:** specific product numbers, vendor addresses, etc **are not required** on this budget page. The name of the product or the type of training or estimated cost of transportation is sufficient.  
**\*Please round numbers to the nearest dollar amount.**

<b>Staff Dev / Training</b>	<b>Vendor / Supplier</b>	<b>Cost per Item</b>	<b>Total</b>
6 Teachers We would like to apply for the Olson Elementary School Academic Award Fund for Olson Facility	GeoTech Conference @Bishop Dunne High School	\$50 a day (2 day registration)	\$600
<b>Transportation</b>	<b>Vendor / Supplier</b>	<b>Cost per Item</b>	<b>Total</b>
4 buses for 6 days	Allen ISD Transportation Department	\$55 per bus \$220 per day for 6 day trips	\$1320
<b>TOTAL AMOUNT REQUESTED</b>			<b>\$1920.00</b>

**Are there any additional funds available for this grant? Campus or district funds? PTA funds? If you have or will be seeking funds from any other sources to help with this project, please explain.**

We will continue to seek funding for professional development workshops and trainings for teachers and students. We will also continue to seek funding for materials and supplies need for classrooms and our science lab. We will continue to seek grant funding through Service Learning Texas Healthy Habitat Grants, Keep Allen Beautiful, Target Field Trip Grants, REI in collaboration with Connemara Conservancy, and other grants that become available through different grant notifications.